

**CLEAN VERSION WITH CHANGES MADE**

**In the Specification:**

Page 2, line 22: please delete the term "chlorodifluoromethane" and replace with the term "dichlorodifluoromethane" as follows:

The present invention comprises a process for separating difluoromethane (HFC-32) from at least one halocarbon of a first mixture comprising difluoromethane (HFC-32) and halocarbon selected from the group consisting of dichlorodifluoromethane (CFC-12), 1,1,1-trifluoroethane (HFC-143a), chloropentafluoroethane (CFC-115), and pentafluoroethane (HFC-125), comprising the steps of:

**In the claims:**

Claim 1 has been amended as follows:

1.(Amended) A process for separating difluoromethane (HFC-32) from at least one halocarbon of a first mixture comprising difluoromethane (HFC-32) and halocarbon selected from the group consisting of dichlorodifluoromethane (CFC-12), 1,1,1-trifluoroethane (HFC-143a), chloropentafluoroethane (CFC-115), and pentafluoroethane (HFC-125), comprising the steps of:

contacting the first mixture with an extractive agent selected from the group consisting of:

hydrocarbon extractive agents consisting of hydrocarbons having from 5 to 9 carbon atoms and having a normal boiling point greater than about 30°C and less than about 155°C,

oxygen-containing extractive agents consisting of alcohols having a normal boiling point greater than about 60°C and less than about 100°C and represented by the formula  $C_xH_{2x+1}OH$ , wherein x is from 1 to 3, and ketones having a normal boiling point greater than about 50°C and less than about 110°C and represented by the formula  $C_yH_{2y+1}COC_zH_{2z+1}$ , wherein y and z are 1 or greater and y+z is at most 5, and

chlorocarbon extractive agents consisting of chlorocarbons having a normal boiling point greater than about 39°C and less than about 150°C and represented by the formula  $C_sH_{2s+2-t}Cl_t$ , wherein s is 1 or 2 and t is from 2 to 4 to form a second mixture,

separating difluoromethane (HFC-32) from at least one halocarbon of the second mixture by extractively distilling the second mixture, and

recovering difluoromethane (HFC-32) substantially free of at least one halocarbon, with the proviso that when the halocarbon is pentafluoroethane (HFC-125), the chlorocarbon extractive agent may not be methylene chloride and when the halocarbon is 1,1,1-trifluoroethane (HFC-143a), the extractive agent may not be an alcohol.

**CLEAN VERSION WITH CHANGES MADE WITH (AMENDED) ELIMINATED**

**In the Specification:**

Page 2, line 22: please delete the term "chlorodifluoromethane" and replace with the term "dichlorodifluoromethane" as follows:

The present invention comprises a process for separating difluoromethane (HFC-32) from at least one halocarbon of a first mixture comprising difluoromethane (HFC-32) and halocarbon selected from the group consisting of dichlorodifluoromethane (CFC-12), 1,1,1-trifluoroethane (HFC-143a), chloropentafluoroethane (CFC-115), and pentafluoroethane (HFC-125), comprising the steps of:

**In the claims:**

Claim 1 has been amended as follows:

1. A process for separating difluoromethane (HFC-32) from at least one halocarbon of a first mixture comprising difluoromethane (HFC-32) and halocarbon selected from the group consisting of dichlorodifluoromethane (CFC-12), 1,1,1-trifluoroethane (HFC-143a), chloropentafluoroethane (CFC-115), and pentafluoroethane (HFC-125), comprising the steps of:

contacting the first mixture with an extractive agent selected from the group consisting of:

hydrocarbon extractive agents consisting of hydrocarbons having from 5 to 9 carbon atoms and having a normal boiling point greater than about 30°C and less than about 155°C,

oxygen-containing extractive agents consisting of alcohols having a normal boiling point greater than about 60°C and less than about 100°C and represented by the formula  $C_xH_{2x+1}OH$ , wherein x is from 1 to 3, and ketones having a normal boiling point greater than about 50°C and less than about 110°C and represented by the formula  $C_yH_{2y+1}COC_zH_{2z+1}$ , wherein y and z are 1 or greater and y+z is at most 5, and

chlorocarbon extractive agents consisting of chlorocarbons having a normal boiling point greater than about 39°C and less than about 150°C and represented by the formula  $C_sH_{2s+2-t}Cl_t$ , wherein s is 1 or 2 and t is from 2 to 4 to form a second mixture,

separating difluoromethane (HFC-32) from at least one halocarbon of the second mixture by extractively distilling the second mixture, and

recovering difluoromethane (HFC-32) substantially free of at least one halocarbon, with the proviso that when the halocarbon is pentafluoroethane (HFC-

125), the chlorocarbon extractive agent may not be methylene chloride and when the halocarbon is 1,1,1-trifluoroethane (HFC-143a), the extractive agent may not be an alcohol.